

**ABSTRACT OF THE DISCLOSURE**

In a method and buffer device for data stream transformation, a buffer memory is configured into addressable locations for writing an input data stream therein, a label memory is used for storing write and read labeled positions, and a buffer controller is connected to the buffer memory and the label memory. The buffer controller controls the writing of the input data stream into the addressable locations of the buffer memory according to the write labeled positions and a write data sequence, calculates the read labeled positions corresponding to the write labeled positions in accordance with the write data sequence and a read data sequence, updates the read labeled positions stored in the label memory, and reads data from the addressable locations of the buffer memory with reference to the read labeled positions stored in the label memory so as to generate an output data stream.